

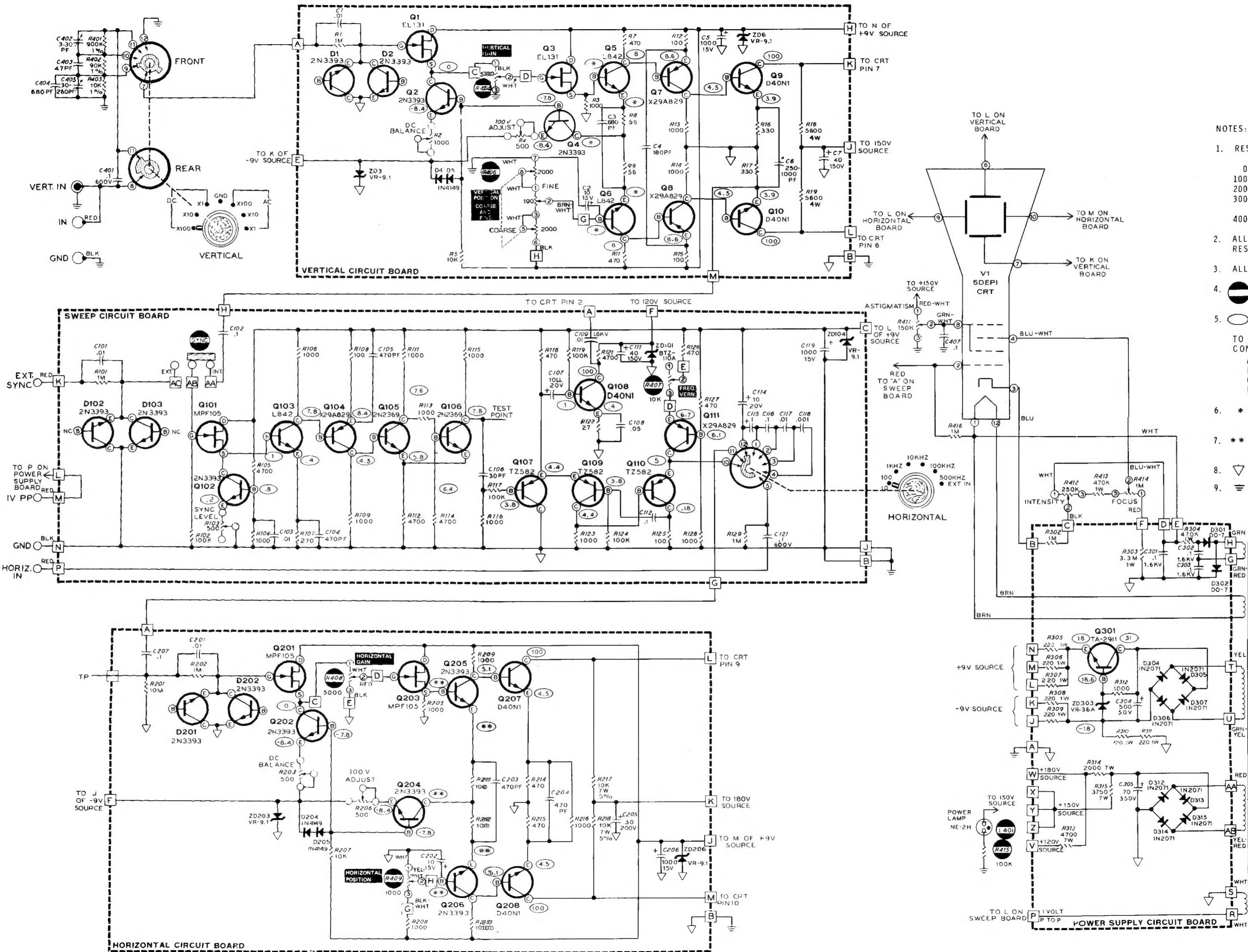
SCHEMATIC OF THE HEATHKIT® OSCILLOSCOPE MODEL 10-102

NOTES:

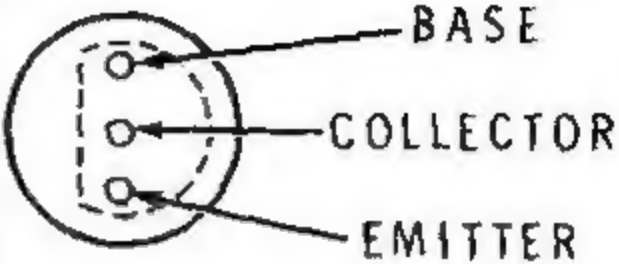
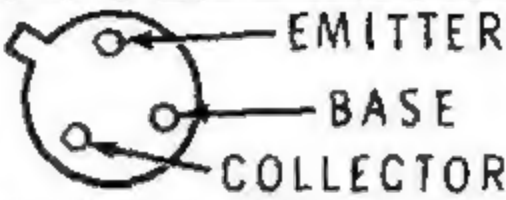
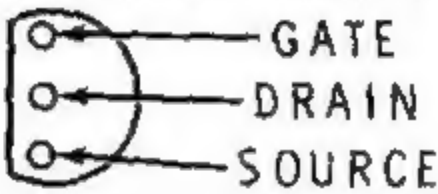
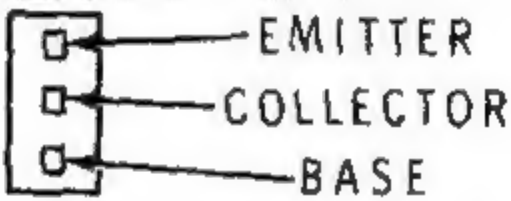
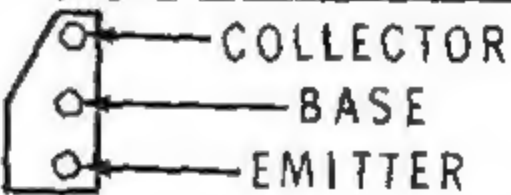





- RESISTOR AND CAPACITOR NUMBERS ARE IN THE FOLLOWING GROUPS.
0-99 PARTS MOUNTED ON THE VERTICAL CIRCUIT BOARD.
100-199 PARTS MOUNTED ON THE SWEEP CIRCUIT BOARD.
200-299 PARTS MOUNTED ON THE HORIZONTAL CIRCUIT BOARD.
300-399 PARTS MOUNTED ON THE POWER SUPPLY CIRCUIT BOARD.
400-499 PARTS MOUNTED ON THE CHASSIS.
- ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1,000, M=1,000,000).
- ALL CAPACITORS ARE μ F UNLESS MARKED OTHERWISE.
- THIS SYMBOL INDICATES A PART MOUNTED ON THE CHASSIS, ALTHOUGH ITS LOCATION IN THE SCHEMATIC SUGGESTS OTHERWISE.
- THIS SYMBOL INDICATES A DC VOLTAGE MEASUREMENT, TAKEN WITH AN 11 MEGOHM INPUT VOLTMETER, FROM THE POINT INDICATED TO CHASSIS GROUND. VOLTAGES ARE TAKEN UNDER THE FOLLOWING CONDITIONS AND MAY VARY $\pm 20\%$.
A. NO VERTICAL INPUT SIGNAL.
B. NO HORIZONTAL INPUT SIGNAL.
C. VERTICAL AND HORIZONTAL AMPLIFIER OUTPUTS BALANCED.
D. SWEEP SWITCH AT EXT IN POSITION.
- * THIS VOLTAGE DEPENDS ON OPERATING PARAMETERS OF TRANSISTOR Q3.
- ** THIS VOLTAGE DEPENDS ON OPERATING PARAMETERS OF TRANSISTOR Q203.
- THIS SYMBOL INDICATES CIRCUIT BOARD GROUND.
- THIS SYMBOL INDICATES CHASSIS GROUND.

IDENTIFICATION CHART

HEATH PART NUMBER	MANUFACTURER'S NUMBER	BASING
417-83	L842	BASE
417-118	2N3393	COLLECTOR
417-201	X29A829	EMITTER
417-221	TZ582	EMITTER
417-154	2N2369	EMITTER
417-241	EL131	GATE
417-169	MPF105	DRAIN
417-175	2N5294	SOURCE
417-245	D40N1	EMITTER
56-19	VR-9.1, 9.1V, 25mA ZENER	BASE
56-55	VR-36A, 36V, 4mA ZENER	COLLECTOR
56-56	1N4149	BASE
57-27	1N2071	EMITTER
57-52	D0-7	EMITTER







IDENTIFICATION CHART

HEATH PART NUMBER	MANUFACTURER'S NUMBER	BASING
417-83 417-118 417-201 417-221	L842 2N3393 X29A829 TZ582	
417-154	2N2369	
417-241 417-169	EL131 MPF105	
417-175	2N5294	
417-245	D40N1	
56-19	VR-9.1, 9.1V, 25mA ZENER	
56-55	VR-36A, 36V, 4mA ZENER	
56-56	1N4149	
57-27	1N2071	
57-52	DO-7	

SCHEMATIC OF THE HEATHKIT® OSCILLOSCOPE MODEL 10-102

NOTES:

1. RESISTOR AND CAPACITOR NUMBERS ARE IN THE FOLLOWING GROUPS.

0-99	PARTS MOUNTED ON THE VERTICAL CIRCUIT BOARD.
100-199	PARTS MOUNTED ON THE SWEEP CIRCUIT BOARD.
200-299	PARTS MOUNTED ON THE HORIZONTAL CIRCUIT BOARD.
300-399	PARTS MOUNTED ON THE POWER SUPPLY CIRCUIT BOARD.
400-499	PARTS MOUNTED ON THE CHASSIS.
2. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1000, M=1,000,000).
3. ALL CAPACITORS ARE μ F UNLESS MARKED OTHERWISE.
4.  THIS SYMBOL INDICATES A PART MOUNTED ON THE CHASSIS, ALTHOUGH ITS LOCATION IN THE SCHEMATIC SUGGESTS OTHERWISE.
5.  THIS SYMBOL INDICATES A DC VOLTAGE MEASUREMENT, TAKEN WITH AN 11 MEGOHM INPUT VOLTMETER, FROM THE POINT INDICATED TO CHASSIS GROUND. VOLTAGES ARE TAKEN UNDER THE FOLLOWING CONDITIONS AND MAY VARY $\pm 20\%$.
 - A. NO VERTICAL INPUT SIGNAL.
 - B. NO HORIZONTAL INPUT SIGNAL.
 - C. VERTICAL AND HORIZONTAL AMPLIFIER OUTPUTS BALANCED.
 - D. SWEEP SWITCH AT EXT IN POSITION.
6. * THIS VOLTAGE DEPENDS ON OPERATING PARAMETERS OF TRANSISTOR Q3.
7. ** THIS VOLTAGE DEPENDS ON OPERATING PARAMETERS OF TRANSISTOR Q203.
8.  THIS SYMBOL INDICATES CIRCUIT BOARD GROUND.
9.  THIS SYMBOL INDICATES CHASSIS GROUND.

